

REMARKS

This Amendment is responsive to the Office Action mailed on September 5, 2006. Claims 1, 31, and 38 are amended. Claim 37 is cancelled. Claims 1, 4-11, 13-15, 17-32, 34, 35, and 38 are pending.

As a preliminary matter, Applicants would like to thank the Examiner and her supervisor for the courteous and productive telephone interview held on June 28, 2007 and the follow-up telephone call from the Examiner on July 11, 2007, the details of which are set forth below.

Claims 31, 32, 34, and 35 are rejected under 35 U.S.C. § 102(b) as being anticipated by King (US 3,874,388).

Claims 1, 4-11, 13-15, 17-20, 23-26, and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Redmond (US 6,613,070).

Claims 21 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over King and Redmond in view of Himpens (US 5,397,331).

Claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over King and Redmond in view of Rousseau (US 6,616,685).

Claim 37 is rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Himpens (US 5,397,331).

Claim 38 is rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Shichman (US 6,197,041).

Applicants respectfully traverse these rejections in view of the amended claims and the following comments.

Discussion of June 28 Telephone Interview and Follow-up Conversation with Examiner

Applicants agree with the Interview Summary mailed by the Examiner on July 10, 2007. In particular, during the June 28, 2007 Interview, Applicants' counsel discussed with the Examiner and the Examiner's supervisor, Michael Hayes, the rejection of claim 1 in view of King. The Examiner agreed that King failed to disclose or suggest wings that do not protrude

laterally over the base part in a flapped in position and where the joints of the wings are fixed on the upper side of the base part. Applicants' counsel agreed to amend claim 1 to clarify that the wings are "fixed" on the upper side of the base part, rather than "seated" on the upper side of the base part. The Examiner indicated that a further search would be necessary before claim 1 could be allowed.

On July 11, 2007, the Examiner telephoned undersigned counsel to indicate that her further search revealed U.S. patent no. 7,052,516 to Cauthen. The Examiner indicated that Figures 13-15 of Cauthen appeared to read on Applicants' claim 1. The Examiner agreed to withdraw the finality of the Office Action and permit Applicants to submit claim amendments and arguments over Cauthen.

The claims are amended herein to overcome Cauthen, as discussed in detail below.

The Examiner is requested to formally list the Cauthen reference on a Form PTO-892 and forward same to the Applicant with the next Official Communication.

Discussion of Amended Claims

Claim 1 is amended to clarify that the wings are "fixed" on the upper side of the base part, rather than "seated" on the upper side of the base part. In addition, claim 1 is amended to specify that the wings are separate wings and that each wing is held on the base part by a respective film hinged joint. Claim 1 is also amended to specify that the joints are fixed on an upper surface of the base part. In addition, claim 1 is amended to specify that, in a flapped-in position, neighboring wings at least partially overlap one another such that no part of the wings protrudes laterally over the base part.

Claim 31 is amended to positively claim the trocar sheath. Claim 31 is also amended to include the subject matter of claim 37, in particular that the holding mandrel has a hollow interior through which a suture thread is guided. Claim 1 is also amended to specify a first centering means for centering the positioning element in the trocar sheath. Claim 31 is also amended to clarify that the centering means for the holding mandrel is a second centering means which

substantially prevents transverse movability of the holding mandrel relative to the positioning element.

Claim 37 is cancelled.

Claim 38 is amended to conform to the changes made to claim 31.

Discussion of Cauthen and Applicants' Amended Claim 1

Cauthen discloses a spinal disc annulus repair stent for repair and reconstruction of the spinal disc wall. The Examiner has indicated that Figures 13-15 of Cauthen read on Applicants' claim 1.

Figures 13-15 of Cauthen show an umbrella shaped annulus stent 10 having a central hub 66 with radially extending struts 67. Each of the struts 67 is joined to the adjacent strut 67 by a webbing material 65, forming a radial extension 76 about the central hub 66 (Col. 12, lines 38-44). The struts 67 are formed from flexible material, allowing the radial extension 76 to be collapsed for insertion into aperture 44, then expanded to conform to the shape of the inner wall of disc annulus 42. In the collapsed position, the annulus stent is substantially frustoconical or shuttlecock shaped (Col. 12, lines 55-60; Figures 13-15).

In contrast to Cauthen, the closure device in accordance with Applicants' amended claim 1 has a plurality of separate wings. Cauthen does not disclose or remotely suggest separate wings as claimed by Applicant. Rather, in Cauthen, the struts 67 are joined together by a webbing material 65 that forms a unified radial extension around the central hub which is substantially umbrella shaped (Col. 12, lines 38-44).

Further, Cauthen does not disclose or remotely suggest a closure device where each separate wing is held by means of a respective film hinged joint on the base part, as claimed by Applicants. In Cauthen, even if the portion of the webbing material extending between two struts 67 could somehow be considered to be wing, such a wing could not be considered a separate wing having a single joint. Cauthen does not disclose any particulars regarding the joint(s) holding the struts and or webbing material on the hub 66. From Figures 13-15 of Cauthen it would appear that there is either a continuous joint around the circumference of the hub 66 or a

separate joint for each strut. Thus, in Cauthen, the portion of the webbing material extending between two struts 67 either has two joints (one for each strut) or a joint that is common with the other portions of the webbing material extending between the other strut pairs. Either way, Cauthen does not show or suggest a single film hinged joint for each separate wing.

Additionally, in Cauthen it appears that the struts and/or webbing is joined to the side of the hub 66. Although no details are provided in Cauthen about the hinge or the joining of the struts 67 or webbing 65 to the hub 66, it appears from Figures 13-15 that the struts 67 and webbing 66 are all connected to a ring which surrounds the circumference of the hub 66, or that the struts 67 and webbing 65 are formed or somehow joined directly to the side of the hub 66. In contrast with Cauthen, with the closure device according to Applicants' amended claim 1, the joints are fixed on an upper surface of the base part. This enables the separate wings to be swiveled into a flapped-in position in which they do not protrude laterally over the base part. Cauthen does not disclose or remotely suggest separate wings which are fixed on an upper surface of the base part, as claimed by Applicants.

In addition, Cauthen does not disclose or remotely suggest separate wings that are arranged on the base part such that, in the flapped-in position, neighboring wings at least partially overlap one another such that no part of the wings protrudes laterally over the base part, as claimed by Applicants. In other words, when the separate wings of Applicants' claimed closure device are folded up, they overlap one another at least partially such that no part of the wings extends outside of the outer circumference of the base part. Thus, with Applicants' claimed invention, it is ensured that if the base part is able to fit through the tissue opening, the entire closure device, including wings, will fit through the opening. Cauthen is to the contrary. As can be seen from Figures 13 and 14, when the struts 67 are collapsed, the webbing sections extending between adjacent struts do not overlap. Further, when the struts are collapsed, the struts and webbing extend outside of the circumference of the hub 66. Further, as indicated in Cauthen, in the collapsed state the stent 10 takes on a frustoconical or shuttlecock like shape (i.e., a cone shape). This cone shape has a much larger outer circumference at an end away from the base part,

and the outer circumference at this end is much larger than that of the base part (e.g., compare Applicants' Figure 4 with Figures 14 and 15 of Cauthen).

Further, with Applicants' claimed invention according to amended claim 1, since the joints are arranged on the upper surface of the base part, an abutment area for the wings is provided on the base part preventing a further swiveling movement of the wings downward. Accordingly, the wings can be secured in the flapped-out position when the wings touch on one side the tissue and on the other side the upper surface of the base part. In contrast, Cauthen does not provided an abutment area for the struts 67 or webbing 65. Also, in Cauthen it appears that, since the struts 67 and webbing 65 are arranged on the side of the hub 66, the struts 67 and webbing 65 of Cauthen can be moved from one side of the hub 66 to the other side of the hub 66.

Accordingly, Cauthen does not disclose or remotely suggest the features of Applicants' amended claim 1.

Applicants respectfully submit that the present invention as set forth in amended claim 1 is not anticipated by and would not have been obvious to one skilled in the art in view of Cauthen, taken alone or in combination with any of the other prior art of record.

Withdrawal of the Examiner's telephone rejection of claim 1 in view of Cauthen is respectfully requested.

Discussion of Rejection of Claim 31

Claim 31 is amended herein to include the subject matter of claim 37. Claim 31 is also amended to specify a first centering means for centering the positioning element in the trocar sheath. In addition, claim 31 is amended to clarify that the centering means for the holding mandrel is a second centering means which substantially prevents transverse movability of the holding mandrel relative to the positioning element.

Claim 31 is rejected as being anticipated by King. Claim 37 is rejected as being unpatentable over King in view of Himpens. The Examiner also relies on Shichman as disclosing a reducing sleeve 130 that surrounds the insertable device (Office Action, page 11).

Applicants respectfully submit that King, Himpens, and Shichman, whether taken alone or in combination, do not disclose the features of Applicants' amended claim 31.

As discussed with the Examiner during the June 28, 2007 telephone interview, the diameter of the inner catheter 2 is much larger than that of the obturator wire 3 and thus the obturator wire 3 is permitted to move transversely in the catheter 2. In particular, King specifically indicates that the wire 3 has a diameter of 1.1 mm or less and that the catheter 2 is a number 5 French size catheter (Col. 7, lines 51-61). A French number 5 catheter has an inner diameter of 1.67 mm, which is substantially larger than the 1.1 mm or less diameter of wire 3. Thus, King does not disclose or remotely suggest a centering means for the holding mandrel which substantially prevents transverse movability of the holding mandrel relative to the positioning element, a claimed by Applicants in amended claim 31.

Further, reference numeral 130 of Shichman identified by the Examiner as a reducing sleeve is actually an actuator for the powered trocar assembly 100 of Shichman (Col. 4, lines 21-22). Such an actuator is not equivalent to a centering means or reducing sleeve for centering a positioning element in a trocar sheath. Applicants respectfully submit that the powered trocar assembly of Shichman is far removed from Applicants' claimed applicator device. In addition, there is no disclosure or suggestion that a holding mandrel having a hollow interior through which a suture can be guided can be used with the powered trocar of Shichman. There is also no suggestion that the powered trocar device of Shichman can be used with a holding mandrel that holds a closure device of the type claimed by Applicants.

Applicant respectfully submits that there is no motivation for one skilled in the art to combine the King, Shichman and Himpens. King relates to a shunt closing system for use in the heart. Shichman discloses a powered trocar that does not accommodate any type of closure device or thread. Himpens discloses an applicator for applying a sheet net for support of an abdominal wall. As can be seen from the respective Figures of the references, the applicator device of King is substantially different from the applicator device of Himpens. In addition, the respective closure devices of King and Himpens are quite different. Thus one skilled in the art would need to substantially modify the applicator device of one King or Himpens to incorporate

elements of the other of King or Himpens. If one skilled in the art were somehow able to combine the teachings of King or Himpens into a workable device, further extensive modifications would be required to modify the resulting applicator device for use with a powered trocar as disclosed in Shichman.

Assuming *arguendo* that one skilled in the art would somehow be motivated to combine King, Shichman, and Himpens, one skilled in the art would not arrive at Applicants' claimed invention according to claim 31. This is so as the combination of the cited references would not result in an applicator having both a first centering means for centering a positioning element in the trocar sheath and a second centering means for the holding mandrel which substantially prevents transverse movability of the holding mandrel relative to the positioning element, as claimed by Applicants.

With a first centering means for centering the positioning element in the trocar sheath and a second centering means for preventing transverse movability of the holding mandrel relative to the positioning element, the closure device can be positioned and manipulated with great accuracy with the applicator device claimed by Applicants. Such an advantage is not provided by the prior art of record.

Only with hindsight impermissibly gained from Applicants' specification could one of ordinary skill in the art have arrived at the conclusions reached by the Examiner.

Applicants respectfully submit that the present invention as set forth in amended claim 31 is not anticipated by and would not have been obvious to one skilled in the art in view of the prior art of record.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the amended claims and the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) is therefore respectfully requested.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



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